

REMARKS

After entry of this amendment, claims 1, 2, 4-8, 19-22, and 25 are pending, of which claims 19-22 and 25 are withdrawn. Claims 3, 9-17, 23, 24, and 26-30 are cancelled without disclaimer or prejudice. The non-elected subject matter has been cancelled or deleted without prejudice or disclaimer. Applicants reserve all rights to pursue the non-elected claims and subject matter in one or more divisional applications. Claims have been amended without prejudice or disclaimer and find support *inter alia* in the original claims. The subject matter of claim 3 has been incorporated into claim 1. The amendments to claim 1 find further support in original claims 1 and 3 and in the specification, for example, at page 5, lines 37-40, at page 6, lines 1-2 and 6-13, at page 10, lines 24-27, at page 29, lines 31-35, and at page 30, lines 15-23. Claim 2 has been amended for proper antecedent basis and finds support in the specification, for example, at page 5, line 37 through page 6, line 2. Claim 5 has been amended for proper antecedent basis. The amendment to claim 8 finds further support in the specification, for example, at page 6, lines 19-39. No new matter has been added.

The specification has also been amended adding appropriate headings, a Brief Description of the Figures, and a paragraph for Related Applications already of record. Support for the figure captions can be found in the specification at page 45, lines 16-24 and in Figures 1-3. No new matter has been added to the specification.

Should the claims be found allowable, the withdrawn claims which depend from or otherwise include all the limitations of an allowable claim are requested to be rejoined. See MPEP § 821.04.

Priority

In the Office Action Summary sheet and at page 2 of the Office Action mailed November 19, 2008, the Examiner indicated that the certified copy of the German priority document had not been filed by Applicants.

Pursuant to MPEP § 1893.03(c), "[t]he U.S. Patent and Trademark Office, as a Designated Office, will normally request the International Bureau to furnish the copy of the

certified priority document upon receipt of applicant's submission under 35 U.S.C. 371 to enter the U.S. national phase. The copy from the International Bureau is placed in the U.S. national stage file. The copy of the priority document received from the International Bureau . . . is acceptable to establish that applicant has filed a certified copy of the priority document. The examiner should acknowledge in the next Office action that the copy of the certified copy of the foreign priority document has been received in the national stage application from the International Bureau.”

Applicants respectfully disagree that a copy of the certified priority document is required to be filed by Applicants as requested by the Examiner. Because this application is a national stage application under 35 U.S.C. § 371 as evidenced by the initial transmittal letter filed February 16, 2005, the U.S. Patent and Trademark Office, as a Designated Office, should have requested a copy of the certified priority document from the International Bureau upon entering the national stage on February 16, 2005. Accordingly, Applicants respectfully request that the U.S. Patent and Trademark Office request the International Bureau to furnish a copy of the certified priority document for this application pursuant to MPEP § 1893.03(c). Furthermore, Applicants respectfully request that the Examiner acknowledge receipt of this document in the next action.

Objections To The Specification

The specification was objected to for missing the section of the Brief Description of the Figures. In light of the amendments, the objection is believed to be rendered moot. Withdrawal of the objections to the specification is respectfully requested.

Claim Objections

The Examiner objected to claim 5 for allegedly reciting “A” and “as claimed in one of claims 1 to 4.” It appears that the amendment made to claim 5 in the Preliminary Amendment dated August 18, 2006 has not been entered. Applicants respectfully request that the amendment to claim 5 made in the Preliminary Amendment dated August 18, 2006 be entered. Please note that the present amendment is based on the amendments made in the Preliminary Amendment having been entered. Reconsideration and withdrawal of this objection is respectfully requested.

Claim 1 is objected to for reciting non-elected sequences and/or genes. Claim 1 has been amended without disclaimer or prejudice. In light of the amendments, the objection is believed to be rendered moot. Withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. § 112, first paragraph

Claims 1-8 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants respectfully disagree and traverse the rejection. Claim 3 has been cancelled without disclaimer or prejudice and thus the rejection directed to this claim is moot.

The Examiner appears to base the rejection on the claims reciting “a” nucleic acid sequence of SEQ ID NO: 1, derivatives, fragments or epitopes. Applicants disagree; however, in order to expedite prosecution, the claims have been amended without disclaimer or prejudice. In light of the amendments, the rejection is believed to be rendered moot.

Moreover, Applicants wish to note that the claimed subject matter relates to a method for identifying herbicidally active substances. As set forth in *Vas-Cath Inc. v. Mahurkar*, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991), the test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to one skilled in the art that the inventor had possession of the claimed subject matter at the time of filing. Thus, the question here is whether Applicants possessed the claimed method.

Example 17 of the Written Description Guidelines (Revision of March 25, 2008) is particularly relevant. In Example 17 of the Guidelines, claim 2 relates to a screening assay for identifying compounds which was found to be adequately described. The practice of the method in Example 17 of the Guidelines did not require the knowledge of the structures and properties of a compound that would result in the desired activity; rather the invention was “the screening process, not the compounds screened or the compounds identified via the claimed process.” Similarly here, the present claims relate to a method for identifying compounds. As in Example 17 of the Guidelines, one of ordinary skill in the art would be able to follow the detailed steps of the claimed method. Accordingly, the specification should satisfy the written description requirement as found in Example 17 of the Written Description Guidelines.

In light of the amendments and the above remarks, reconsideration and withdrawal of the rejection is respectfully requested.

Rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejects claim 1 as being unclear regarding the alternative language used, for reciting “wherein the gene product” in the last line, for the recitation of “and/or” following part ff). Claim 1 has been amended without prejudice or disclaimer for clarification. In light of the amendments to claim 1, these rejections are believed to be rendered moot.

Claims 2 and 3 were rejected lack of antecedent basis for the recitation of “the activity of the nucleic acid.” Claim 3 has been cancelled without disclaimer or prejudice and thus the rejection directed to this claim is moot. Claim 2 has been amended without prejudice or disclaimer for clarification. In light of the amendments to claim 2, the rejection is believed to be rendered moot.

Claim 4 was rejected for reciting “the identification of the substance,” claim 5 for “the selected substances,” and claim 8 for “an organism which is.” Claims 1, 5, and 8 have been amended without prejudice or disclaimer for clarification. In light of the amendments to claims 1, 5, and 8, the rejections are believed to be rendered moot.

In light of the amendments and the above remarks, reconsideration and withdrawal of the rejections are respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1, 2, and 5-8 were rejected as anticipated under 35 U.S.C. § 102(b) by Levin *et al.* (U.S. Patent No. 6,387,637; hereinafter “Levin”). Applicants respectfully disagree and traverse the rejection.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegall Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). “[U]nless a reference discloses within the four corners of the document not only all the limitations claimed but also all of the limitations

arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.” *Net Money/IN Inc. v. VeriSign Inc.*, 545 F.3d 1359 (Fed. Cir. 2008).

The Examiner appears to base the rejection on the recitation in claim 1 of “a” nucleic acid sequence of SEQ ID NO: 1. In order to expedite prosecution, claim 1 has been amended without disclaimer or prejudice. In light of the amendment, the rejection is believed to be rendered moot.

Moreover, the subject matter of claim 3 has been incorporated into claim 1, and thus also into the claims dependent therefrom. Since claim 3 was not included in the rejection and the subject matter of claim 3 is incorporated into the claims as amended, Levin does not teach every limitation of the claims. This rejection is believed to be rendered moot for this additional reason.

Because Levin does not teach every limitation of the claims, Levin does not anticipate the claims as amended. See also *Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (“[T]o hold that a prior art reference anticipates a claim, the Board must expressly find that every limitation in the claim was identically shown in the single reference.”). Reconsideration and withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 1-8 are rejected as being obvious under 35 U.S.C. § 103(a) over Levin in view of Siehl *et al.* (U.S. Patent No. 5,780,254; hereinafter “Siehl”) and Berg *et al.* (1999; hereinafter “Berg”). Applicants respectfully traverse and urge reconsideration of the rejection for the following reasons.

The Examiner bears the initial burden of establishing *prima facie* obviousness. See *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). Further, to support a *prima facie* conclusion of obviousness, the prior art must disclose or suggest all the limitations of the claimed invention. See *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994); see also *Ex parte Alexander*, 86 USPQ2d 1120, 1122 (BPAI 2007) (where the Board reversed the obviousness rejection in part because the Examiner had not identified all the elements of the claim).

The Examiner alleges that Levin teaches methods of identifying substances that can inhibit activity of various genes. As explained under the anticipation rejection, the Examiner bases the rejection on claim 1 reading on any fragment of SEQ ID NO: 1 because of the recitation in claim 1 of “a” nucleic acid sequence of SEQ ID NO: 1. In light of the amendment, this basis for the rejection is no longer applicable. Levin does not teach or suggest the nucleic acids recited in the method of claim 1. The Examiner also acknowledges that Levin does teach the activity of the gene “is reduced or blocked by a low-molecular-weight substance” as in former claim 3 or that the identification is carried out in “a high-throughput screening” as in claim 4.

The Examiner relies on Berg for allegedly teaching high throughput screening of herbicides. High-throughput screening is only recited in dependent claim 4. Berg is therefore not relevant as support for an obviousness rejection of independent claim 1 which does not recite high throughput screening. Moreover, Berg does not remedy the deficiencies of Levin. Berg also does not teach or suggest the nucleic acids recited in claim 1. Additionally Berg does not provide information about the type of substance reducing or blocking the activity of the nucleic acid or of the amino acid sequence as required by the present claims. Thus neither Berg nor Levin, alone or in combination, teach or suggest the nucleic acids recited in present claim 1 or that the activity of the gene “is reduced or blocked by a low-molecular-weight substance.”

The Examiner contends that Siehl teaches identifying compounds that specifically inhibit a plant gene target and thus identifying a herbicide. The Examiner relies on Siehl for using various compounds which allegedly reads on “low-molecular weight substances.” Siehl however does not remedy the deficiencies of Levin and/or Berg. None of the references cited by the Examiner teach or suggest the nucleic acids recited in present claim 1. Because all the claim limitations are not taught or suggested by the references cited by the Examiner, a *prima facie* case of obviousness has not been established.

Additionally, it is well established that under 35 U.S.C. § 103 the Examiner must consider the reference in its entirety, *i.e.* as a whole, including portions that teach away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); see also *KSR*, 127 S. Ct. at 1740; MPEP

§ 2141.03 (VI). It is improper to combine references where the references teach away from their combination. *See* MPEP § 2145 (X)(D)(2) (citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)).

Siehl discloses a two-step method for identifying compounds that specifically inhibit the plant purine biosynthesis pathway, especially adenylosuccinate synthetase (see Siehl, for example at col. 1, ll. 52-65). This enzyme is totally different from the protein encoded by SEQ ID NO: 2 as recited in the present claims. Moreover, the principle of the Siehl method relies on a two step process. In the first step, an inhibitor of the plant purine biosynthesis pathway, which is a cascade of several enzymatic steps involving several enzymes (at least two), is identified (probe compound). In the second step, a specific enzyme is identified as target by a reversion experiment (antidote). By contrast the present invention relates to the inhibition of one specific identified enzyme. Thus Siehl discloses a different method and different targets.

The Examiner further asserts that it would be obvious to substitute one type of compound for another. The Examiner also asserts that one skilled in the art would be motivated to use low molecular weight compounds because Siehl teaches the need for using appropriate compounds to inhibit identified gene targets. However, contrary to the Examiner's assertion, because Siehl teaches a very specific target, *i.e.* the plant purine biosynthesis pathway, especially adenylosuccinate synthetase, and the need for using the appropriate compound as asserted by the Examiner, one skilled in the art would not be motivated to substitute types of compounds when the need for using the appropriate compound with the specific target is taught. Rather one skilled in the art would not be motivated for conducting any substitution because of the specificity disclosed in Siehl and acknowledged by the Examiner. Consequently, Siehl is not combinable with Levin. Accordingly, the Examiner has not established a *prima facie* case of obviousness for this additional reason.

Because the references cited by the Examiner, alone or in combination, do not teach all the claim limitations and because they teach away from their combination, a *prima facie* case of obviousness has not been established. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (holding that if an independent claim is nonobvious then any claim dependent therefrom is nonobvious). Reconsideration and withdrawal of the rejection is respectfully requested.

Double Patenting Rejection

Claims 1, 2, 4, and 6-8 are provisionally rejected on the ground of nonstatutory obviousness-type double-patenting over U.S. Application Serial No. 10/467,962 (the '962 application) in view of Levin. Applicants respectfully disagree and traverse the rejection.

The Examiner rejects the claims based on the same arguments as presented above under the § 102 rejection for Levin for the recitation of "a" nucleic acid in claim 1. The explanations provided above for Levin are equally applicable to this rejection and are incorporated herein in their entirety. In light of the amendments and the explanation above, this rejection is believed to be rendered moot.

Furthermore, the subject matter of claim 3 has been incorporated into claim 1, and thus also into the claims dependent therefrom. Since claim 3 was not included in the rejection and the subject matter of claim 3 is incorporated into the claims as amended, the '962 application and Levin, alone or in combination, do not teach every limitation of the claims. This rejection is believed to be rendered moot for this additional reason.

Because the references cited by the Examiner, alone or in combination, do not teach all the claim limitations, a *prima facie* case of obviousness has not been established. See *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (holding that if an independent claim is nonobvious then any claim dependent therefrom is nonobvious). Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

Accompanying this response is a petition for a two-month extension of time to and including April 20, 2009, pursuant to 37 CFR § 1.7(a) to respond to the Office Action mailed November 19, 2008, with the required fee authorization. No further fee is believed due.

However, if an additional fee is due, the Director is authorized to charge our Deposit Account No. 03-2775, under Order No. 13195-00009-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 

Roberte M. D. Makowski

Registration No.: 55,421

CONNOLLY BOVE LODGE & HUTZ LLP

1007 North Orange Street; P.O. Box 2207

Wilmington, Delaware 19899

(302) 658-9141

(302) 658-5614 (Fax)

Attorney for Applicants

649347_1